Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

Claims 1-10 (Canceled)

11. (new) A scanning monochromator, comprising:

a light source;

a collimator mirror at a first radial position relative to the light source;

an angle-adjustable mirror at a second radial position relative to the light source; and

a diffraction grating at a third radial position relative to the light source, wherein the second radial position is spaced apart from the first radial position in a radial direction by an acute angle, and the third radial position is spaced apart from the second radial position in the radial direction by an acute angle.

12. (new) The scanning monochromator according to claim 11, wherein the scanning monochromator does not include a lens or a prism.

13. (new) The scanning monochromator according to claim 11, wherein a light path between the light source, the collimator mirror, the angle-adjustable mirror and the diffraction grating consists of a gas.

14. (new) The scanning monochromator according to claim 11, wherein the collimator mirror is substantially parabolic or spherical.

15. (new) The scanning monochromator according to claim 11, wherein the angle-adjustable mirror has a major dimension less than one millimeter.

16. (new) The scanning monochromator according to claim 11, wherein the scanning monochromator is handheld.

17. (new) The scanning monochromator according to claim 11, further comprising an analyzing unit.

18. (new) The scanning monochromator according to claim 11, further comprising an electrode configured to move the angle-adjustable mirror by electrostatic force.

19. (new) The scanning monochromator according to claim 18, wherein the power supply to the electrode is variable to control movement of the angle-adjustable mirror.

20. (new) A scanning monochromator, comprising:

a light source;

a collimator mirror positioned to receive an input beam of light from the light source;

an angle-adjustable mirror positioned to receive the input beam of light reflected from the collimator mirror; and

a diffraction grating positioned to receive the input beam of light reflected from the angle-adjustable mirror.

21. (new) The scanning monochromator according to claim 20, wherein the scanning monochromator does not include a lens or a prism.

22. (new) A scanning monochromator, comprising:

a collimator mirror;

an angle-adjustable mirror; and

a diffraction grating spaced apart from the angle-adjustable mirror, wherein the scanning monochromator is configured such that an input beam travels from the collimator mirror to the angle-adjustable mirror and then to the diffraction grating, the diffraction grating disperses the

input beam to form a dispersed output beam, and the dispersed output beam travels from the diffraction grating to the angle-adjustable mirror and then to the collimator mirror.

23. (new) The scanning monochromator according to claim 22, further comprising a sample receiver configured to hold a sample in the path of the input beam as it travels between a source and the collimator mirror.

24. (new) The scanning monochromator according to claim 22, wherein the angle-adjustable mirror and the diffraction grating are sized to operate with near infrared and/or middle infrared light.

25. (new) The scanning monochromator according to claim 22, wherein the scanning monochromator does not include a lens or a prism.

26. (new) The scanning monochromator according to claim 22, further comprising a detector, wherein the dispersed output beam travels from the collimator mirror to the detector after traveling from the angle-adjustable mirror to the collimator mirror.

27. (new) The scanning monochromator according to claim 26, wherein the detector is a first detector and the scanning monochromator further comprises a second detector.

28. (new) The scanning monochromator according to claim 27, wherein the input beam and the dispersed output beam represent a first channel detected by the first detector, and the scanning monochromator is configured to simultaneously operate with a second channel detected by the second detector.

29. (new) The scanning monochromator according to claim 22, further comprising a source for generating the input beam.

30. (new) The scanning monochromator according to claim 29, wherein the source generates near infrared and/or middle infrared light.

31. (new) A method for dispersing and scanning light, comprising:

directing an input beam of light from a source into a scanning monochromator configured such that the input beam travels from a collimator mirror to an angle-adjustable mirror and then to a diffraction grating, the diffraction grating disperses the input beam to form a dispersed output beam, and the dispersed output beam travels from the diffraction grating to the angle-adjustable mirror and then to the collimator mirror; and

moving the angle-adjustable mirror to scan the dispersed output beam across a detector.

32. (new) The method according to claim 31, wherein moving the angle-adjustable mirror comprises adjusting the power supply to an electrode in electrostatic communication with the angle-adjustable mirror.

33. (new) The method according to claim 31, wherein the input beam of light is near infrared and/or middle infrared.

34. (new) A method for making a scanning monochromator, comprising:

providing a light source;

positioning a collimator mirror at a first radial position relative to the light source;

positioning an angle-adjustable mirror at a second radial position relative to the light source; and

positioning a diffraction grating at a third radial position relative to the light source, wherein the second radial position is spaced apart from the first radial position in a radial direction by an acute angle, and the third radial position is spaced apart from the second radial position in the radial direction by an acute angle.

35. (new) The method according to claim 34, wherein the angle-adjustable mirror has a major dimension less than one millimeter.

36. (new) The method according to claim 34, wherein the light source generates near infrared and/or middle infrared light.

37. (new) The method according to claim 36, wherein the collimator mirror and the diffraction grating are similarly sensitive to near infrared and/or middle infrared light.